REMARKS

Claims 1-14, 16, 17 and 19-29 are pending in this application. By this Amendment, claims 1, 2, 4, 5, 8-11-13, 16, 19, 21, 23, 24, 26 and 27 are amended, claims 15 and 18 are canceled and claims 28 and 29 are added.

The Office Action rejects claims 9-12 under 35 U.S.C. 101 for allegedly being directed to non-statutory subject matter.

This rejection is respectfully traversed. Claims 9 – 11 are directed to a computer signal embodied on a carrier wave. Thus, these claims are clearly directed to a technological art (e.g., computer communications) providing a concrete, useful, and tangible result. Further, the Examiner's attention is respectfully directed to the Examination Guidelines for Computer Related Inventions, dated March 28, 1996 and available at the USPTO web site. Copies of the relevant portions of the Examination Guidelines are submitted herewith for the Examiner's convenience and review. These guidelines include an automated manufacturing plant example including a claim directed to a computer data signal embodied in a carrier wave (See claim 13). The guidelines indicate that this type of claim contains statutory subject matter. Accordingly, it is respectfully submitted that claims 9 – 11 are directed to statutory subject matter, and therefore that this rejection be withdrawn.

The Office Action rejects claims 4, 8 and 12 under 35 U.S.C. 112, second paragraph for their use of the term "substantially". For simplicity, the term "substantially" has been removed from these claims. However, it should be understood from the specification the degree of difference between the power level of boosted versus the power level of the non-boosted portions of the received signal. It is respectfully requested that this rejection be withdrawn.

The Office Action rejects claims 1, 3-5, 8, 9 and 11 under 35 U.S.C. 102(b) as allegedly being anticipated by U.S. Patent No. 5,937,000 to Lee ("Lee"). In addition, the Office Action rejects claims 2, 6, 7, 10 and 13-27 under 35 U.S.C. 103(a) as being unpatentable over Lee and further in view of U.S. Patent No. 5,822,429 to Casabona ("Casabona").

According to the present invention, a data communication technique is provided in which high power pulses are staggered in time such that the length of the time intervals between pulses are known to the receiver. When the signal is transmitted from the transmitter to the receiver, the receiver uses this knowledge to acquire the signal without the need for time-synchronization. Furthermore, the duration of the time intervals between the high power pulses can be cryptographically controlled using a cryptographic key known to both the transmitter and the receiver.

Independent claims 1, 13, 16 and 28 are directed to transmitting a signal according to techniques of the invention. Independent claims 5, 19, 24 and 29 are directed to receiving a signal according to the techniques of the invention. Independent claim 9 is directed to a computer signal embodied in a carrier wave, formatted according to the techniques for transmitting a signal according to the invention. Again, one major advantage of these techniques is that the transmitter and receiver do not have to be time synchronized because the synchronization information is contained in the transmitted signal in a particular manner.

Claims 1, 9, 13, 16 and 28 all describe, with slightly different language, a technique or apparatus for transmitting a signal, wherein synchronization information for the signal is represented by the durations of time intervals between groups of chips at an increased power level relative to groups of chips at a nominal or base power level. By varying these time durations according to a coding technique, the synchronization information can be protected using a variety of cryptographic techniques as described in the specification for the present application.

Lee has been carefully reviewed and it is respectfully submitted that it makes no teaching or suggestion of using the time durations between groups of chips at an increased power level (i.e., high power chips) to indicate or represent time synchronization information that is to be recovered at the receiver for purposes of acquiring synchronization to the signal when received by a receiver. The noted portion of the Lee reference at column 8, lines 57-61, merely describes that an auxiliary data signal is modulated to produce a colored noise signal that is added to the primary data signal. This is totally unrelated to the claimed concept of using time durations between

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groups of boosted power chips to represent synchronization information for a signal transmitted from a transmitter to a receiver.

Claims 5, 19, 24 and 29 describe, again in varying degrees of detail, receiving a signal comprised of sequences or chips, where the durations of time intervals between certain sequences or in particular between the higher power chips, are detected to acquire synchronization to the transmitted signal. Again, Lee makes no teaching or suggestion of acquiring synchronization to a signal by detecting and processing the durations of time intervals between groups of increased or high power chips.

The Casabona reference is cited primarily for its teaching of cryptographic algorithms to encrypt transmission characteristics of a signal. However, Casabona adds no teaching to Lee that renders the claims unpatentable in view of the foregoing. In particular, Casobona, even if properly combinable with Lee, fails to teach the concept of encoding synchronization information for a signal based on the time durations between groups of higher power chips that are interspersed with lower power chips in a signal.
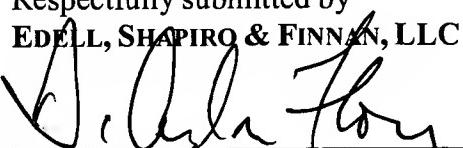
For these reasons, it is respectfully submitted that claims 1-14, 16, 17 and 19-29 are in condition for allowance. The Examiner is cordially invited to telephone the undersigned in the event there are any further questions or comments.

Also filed herewith is an excess claim fee payment in the amount of $400 for two independent claims in excess of the seven previous paid for. Applicant hereby petition for any extension of time which may be required to maintain the pendency of this case, and any required fee for such extension is to be charged to Deposit Account No. 05-0460.

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